

REMARKS

Claims 1-7 are all the claims pending in the application.

In the present Amendment, claim 1 has been amended to recite that the concentration of the anionic emulsifier (B) containing a sulfur atom is increased inward from the surface. Support for the amendment to claim 1 can be found, for example, at page 15, lines 3-7.

No new matter has been added, and entry of the Amendment is respectfully requested.

I. Rejection under 35 U.S.C. § 112

Claims 1-7 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The Examiner asserts that, while there is support for the claims limitation “homopolymer of polyethylene glycol” or “homopolymer of polypropylene glycol” of claim 1, there is no support to recite “homopolymer of polyalkylene glycol”.

Without conceding the merits of the rejection, in the Amendment under 37 C.F.R. § 1.116 filed January 5, 2010, claim 1 was amended to limit the homopolymer of polyalkylene glycol to a homopolymer of polyethylene glycol and a homopolymer of polypropylene glycol.

In the Advisory Action dated January 26, 2010, the Examiner stated that the rejection of claims 1-7 under 35 U.S.C. §112, first paragraph, is withdrawn in view of Applicants’ amendment.

II. Rejection under 35 U.S.C. § 103

Claims 1-7 are rejected under 35 U.S.C. § 103(a) as being unpatentable over on Lucast et al. (WO 00/78884; or its equivalent US 6,518,343B1; “Lucast”) in view of Coopridner et al. (US 5,571,617; “Coopridner”), Imamura et al. (US 5,783,209; “Imamura”), and further as evidenced

by Istvan Benedek and Luck J. Heymans (Pressure-Sensitive Adhesive Technology, Marcel Dekker Inc., Chapter 8, page 412, 1997).

On page 11 of the Office Action dated July 9, 2009, the Examiner states that he is no longer relying on Lucast to teach or suggest the limitation of a homopolymer of polyalkylene glycol (i.e. one of the hydrophilic polymers C of claimed invention). Instead, the Examiner now relies on newly cited Imamura et al as assertedly rendering obvious this aspect of the claims.

Imamura is relied upon by the Examiner as allegedly disclosing a medical pressure-sensitive adhesive. The Examiner further asserts that Imamura discloses the addition of hydrophilic polymer particles due to Imamura's disclosure of polyvinyl alcohol ("PVOH") and polyvinyl pyrrolidone. *See* Office Action dated July 9, 2009, at page 6, last paragraph.

Applicants respectfully traverse.

Present claim 1 is directed to a pressure-sensitive adhesive tape or sheet comprising a substrate having a pressure-sensitive adhesive layer on at least one side thereof, wherein the whole of the pressure-sensitive adhesive layer is formed of an aqueous dispersion pressure-sensitive adhesive composition.

Claim 1, as amended, recites that the concentration of the anionic emulsifier (B) containing a sulfur atom is increased inward from the surface.

Applicants respectfully submit that there is insufficient motivation to combine Imamura with the other cited references, in the manner suggested by the Examiner. Further, one of the ordinary skill would not have arrived at the present invention, even by combining the teachings of Imamura with the other cited references.

According to the present invention, when the hydrophilic polymer is added to an aqueous dispersion pressure-sensitive adhesive composition, the hydrophilic polymer is added as an aqueous solution.

Imamura does not disclose adding the hydrophilic polymer as an “aqueous solution” as required by claim 1 of the present application. Instead, Imamura discloses adding hydrophilic polymer as “particles” or “partially crosslinked materials.” See Col. 6, lines 19-30.

Instant claim 1 recites that the hydrophilic polymer is added as an aqueous solution after the polymerization of the acrylic polymer, and the present specification also describes that “in order that the polymerization of the acrylic polymer (A) may not be adversely affected, it is preferable to contain the hydrophilic polymer (C) in the aqueous dispersion type pressure-sensitive adhesive composition by adding it as an aqueous solution after the polymerization of the acrylic polymer” (see, lines 2-7 on page 30). Therefore, the hydrophilic polymer is added in a state of being dissolved in water.

In contrast, the hydrophilic polymer particles or crosslinked materials described in Imamura does not result in an aqueous solution.

Indeed, in all the Examples of Imamura, “ethyl acetate” is used as a polymerization solvent, while Coopridier is directed to an invention where “water” is used as a polymerization solvent. One of ordinary skill in the art would understand that, in general, an emulsifier is not used in the case of using an organic solvent as a polymerization solvent. Rather, adding an emulsifier in the case of using an organic solvent as a polymerization solvent adversely affects the pressure-sensitive adhesive characteristics. Therefore, for at least this reason alone, one of

ordinary skill in the art would not be motivated to combine Imamura and Coopridier.

In view of the above, it is respectfully submitted that one of ordinary skill in the art would not be motivated to combine Lucast, Coopridier and Imamura in the manner suggested by the Examiner. Even if the references were somehow combined, the asserted combination of Lucast, Coopridier and Imamura would not arrive at the claimed invention, where the hydrophilic polymer is added as an aqueous solution after the polymerization of the acrylic polymer and where the concentration of the anionic emulsifier (B) containing a sulfur atom is increased inward from the surface.

Further, in the Advisory Action dated January 26, 2010, at page 5, regarding Applicants' arguments that Imamura describes adding hydrophilic polymer as particle, the Examiner stated that "[T]he claim limitation 'wherein the hydrophilic polymer is added as an aqueous solution after the polymerization of the acrylic polymer' is interpreted as product-by-process limitation." The Examiner states that "Applicant's arguments may be persuasive, if applicant can show on the record (e.g. suitable affidavit/declaration) that there would clearly be structural and/or performance difference as a result of addition of hydrophilic polymer of Imamura as particle; instead of aqueous solution as claimed."

Applicants submit the following.

Present claim 1 recites that the hydrophilic polymer is added as aqueous solution after the polymerization of the acrylic polymer. The present specification also describes that "in order that the polymerization of the acrylic polymer (A) may not be adversely affected, it is preferable to contain the hydrophilic polymer (C) in the aqueous dispersion type pressure-

sensitive adhesive composition by adding it as an aqueous solution after the polymerization of the acrylic polymer” (see, lines 2-7 on page 30). This is because the adhesion of the obtained tape or sheet with respect to wetting surface is different in comparison with that in the case of adding hydrophilic polymer during the polymerization.

In the case that the hydrophilic polymer is added during the polymerization, the hydrophilic polymer adsorbs to the pressure-sensitive adhesive polymer particles to surround them, and consequently, the hydrophilic polymer uniformly distributes in the entire pressure-sensitive adhesive. On the other hand, when the hydrophilic polymer is added after the polymerization, it distributes in an aggregated form, and consequently, it becomes possible to absorb moisture efficiently.

Imamura discloses adding a hydrophilic polymer as particles or as partially crosslinked materials, which is quite different from the present invention and the result obtained according to Imamura (i.e., adding hydrophilic polymer as particles or as partially crosslinked materials) is different from that of the present invention. Specifically, when adding a hydrophilic polymer as crosslinked particles to emulsion-type pressure-sensitive adhesive polymer as in Imamura, the water absorbability is low because the surface area is small due to the particle-form, and the swelling degree with water is also small due to crosslinking.

Thus, it is submitted that there are patentably distinctive differences between the instantly claimed pressure-sensitive adhesive tape (in which the hydrophilic polymer is added as an aqueous solution after the polymerization of the acrylic polymer) and that of Imamura, as the

result of the addition of hydrophilic polymer of Imamura as particle; instead of aqueous solution as claimed.

It is respectfully submitted that Lucast, either alone or in view of Coopridier and Imamura and the other cited references, does not disclose or render obvious the presently claimed pressure-sensitive adhesive tape or sheet of claim 1.

Accordingly, the present claims are not obvious over Lucast, either alone or in view of Coopridier and Imamura and the other cited references. Reconsideration and withdrawal of the foregoing §103(a) rejection of the present claims are respectfully requested.

III. Conclusion

In view of the above, reconsideration and allowance of this application are now believed to be in order, and such actions are hereby solicited. If any points remain in issue which the Examiner feels may be best resolved through a personal or telephone interview, the Examiner is kindly requested to contact the undersigned at the telephone number listed below.

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